Attorney Docket No. 9233-22DV

Page 2 of 11

Please amend the specification as follows:

At page one, following the title, the following paragraph has been added to the revised specification filed herewith.

## -- Related Applications

This application is a divisional application of U.S. Patent Application No. 09/459,443, filed December 13, 1999, allowed, the disclosure of which is incorporated herein by reference in its entirety.--

## IN THE CLAIMS

Please amend the claims as follows.

Please cancel claims 1-32 without prejudice.

Please add the following new claims. These claims are included in the revised specification and renumbered 1- 35 for publication of this divisional application.

Puls 1.120 36,36(1). A method of providing release of cholecystokinin in a subject, comprising administering to the subject an effective amount of a luminal cholecystokinin releasing factor polypeptide comprising

- i) a lysine residue;
- ii) an oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor polypeptide; and
- iii) an oligomeric moiety attached to the lysine residue, whereby upon administration to the subject, said compound integrates into a cell membrane of the gut epithelium of the subject wherein the luminal cholecystokinin releasing factor

Attorney Docket No. 9233-22DV

Page 3 of 11

polypeptide binds with a target receptor on the surface of an epithelial cell, thereby providing release of cholecystokinin.

37 34.(2) The method of claim 38, wherein the oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor peptide is a branched oligomeric moiety.

38 The method of claim 34, wherein the branched oligomeric moiety has the following formula:

where n is from 3 to 230 and m is from 0 to 20.

37
39.36.(4) The method of claim 34, wherein the branched oligomeric moiety has the following formula:

where n is from 3 to 230 and m is from 0 to 20 and X is selected from the group consisting of N, O or S.

37 437.(5) The method of claim 34, wherein the branched oligomeric moiety has a total average molecular weight of 4,000 to 10,000 Daltons.

4 L38.(6) The method of claim 38, wherein the oligomeric moiety is attached to the N-terminus using a hydrolyzable linker.

Rule

Attorney Docket No. 9233-22DV

Page 4 of 11

The method of claim 34, wherein the branched oligomeric moiety is attached to the N-terminus using a non-hydrolyzable linker.

The method of claim 23, wherein the oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor polypeptide has a total average molecular weight of 4,000 to 10,000 Daltons.

The method of claim 33, wherein the oligomeric moiety is attached to the lysine residue using a hydrolyzable bond.

The method of claim 33, wherein the oligomeric moiety attached to the lysine residue is a linear oligomeric moiety.

The method of claim 42, wherein the linear oligomeric moiety is attached to the lysine residue using a hydrolyzable bond.

36.(12) The method of claim 23, further comprising a lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide.

47 (13) The method of claim 46, further comprising a linear oligomeric moiety attached to the lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide.

48 (14) A method of treating obesity in a subject comprising administering to the subject an effective amount of a luminal cholecystokinin releasing factor polypeptide comprising

i) a lysine residue;

Attorney Docket No. 9233-22DV

Page 5 of 11

- ii) an oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor polypeptide; and
  - iii) an oligomeric moiety attached to the lysine residue.

50 .49.(15) The method of claim 48, wherein the oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor peptide is a branched oligomeric moiety.

51 \$0.(16) The method of claim \$50, wherein the branched oligomeric moiety has the following formula:

where n is from 3 to 230 and m is from 0 to 20.

52 54:(17) The method of claim 49, wherein the branched oligomeric moiety has the following formula:

where n is from 3 to 230 and m is from 0 to 20 and X is selected from the group consisting of N, O or S.

53 52.(18) The method of claim 49, wherein the branched oligomeric moiety has a total average molecular weight of 4,000 to 10,000 Daltons.

54 53.(19) The method of claim 48, wherein the oligomeric moiety is attached to the N-

Pull

Attorney Docket No. 9233-22DV

Page 6 of 11

terminus using a hydrolyzable linker.

Pele 1.124 55 54.(20) The method of claim 49, wherein the branched oligomeric moiety is attached to the N-terminus using a non-hydrolyzable linker.

55.(21) The method of claim 48, wherein the oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor polypeptide has a total average molecular weight of 4,000 to 10,000 Daltons.

57 49 56.(22) The method of claim 48, wherein the oligomeric moiety is attached to the lysine residue using a hydrolyzable bond.

58
57.(23) The method of claim 36, wherein the oligomeric moiety attached to the lysine residue is a linear oligomeric moiety.

56. (24) The method of claim 57, wherein the linear oligomeric moiety is attached to the lysine residue using a hydrolyzable bond.

59.(25) The method of claim 48, further comprising a lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide.

60.(26) The method of claim 59, further comprising a linear oligomeric moiety attached to the lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide.

Attorney Docket No. 9233-22DV

Page 7 of 11

Rule 1.126 67.(27) A method of providing release of cholecystokinin in a subject, comprising administering to the subject an effective amount of a luminal cholecystokinin releasing factor polypeptide comprising

- i) a first lysine residue;
- ii) a second lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide;
- iii) a branched oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor polypeptide using a non-hydrolyzable linker;
- iv) a linear oligomeric moiety attached to the first lysine residue of the luminal cholecystokinin releasing factor polypeptide using a hydrolyzable bond; and
- v) a linear oligomeric moiety attached to the second lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide, whereby, upon administration to the subject, said compound integrates into a cell membrane of the gut epithelium of the subject wherein the luminal cholecystokinin releasing factor polypeptide binds with a target receptor on the epithelial cell surface, thereby providing release of cholecystokinin.
- 62. (28) The method of claim 61, wherein the branched oligomeric moiety has the following formula:

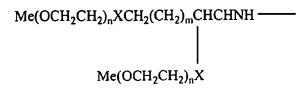
$$\begin{array}{c|c} \text{Me}(\text{OCH}_2\text{CH}_2)_n \text{OCH}_2(\text{CH}_2)_m \text{CHCHNH} & \hline \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & &$$

where n is from 3 to 230 and m is from 0 to 20.

63.(29) The method of claim 61, wherein the branched oligomeric moiety has the following formula:

Attorney Docket No. 9233-22DV

Page 8 of 11



where n is from 3 to 230 and m is from 0 to 20 and X is selected from the group consisting of N, O or S.

54.(30) The method of claim 51, wherein the branched oligomeric moiety has a total average molecular weight of 4,000 to 10,000 Daltons.

- 63.(31) A method of treating obesity in a subject, comprising administering to the subject an effective amount of a luminal cholecystokinin releasing factor polypeptide comprising
  - i) a first lysine residue;
- ii) a second lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide;
- iii) a branched oligomeric moiety attached to the N-terminus of the luminal cholecystokinin releasing factor polypeptide using a non-hydrolyzable linker;
- iv) a linear oligomeric moiety attached to the first lysine residue of the luminal cholecystokinin releasing factor polypeptide using a hydrolyzable bond; and
- v) a linear oligomeric moiety attached to the second lysine residue at the C-terminus of the luminal cholecystokinin releasing factor polypeptide.
- 56.(32) The method of claim 65, wherein the branched oligomeric moiety has the following formula:

July 1.10

Attorney Docket No. 9233-22DV

Page 9 of 11

where n is from 3 to 230 and m is from 0 to 20.

57.(33) The method of claim 65, wherein the branched oligomeric moiety has the following formula:

$$\begin{array}{c} \text{Me(OCH}_2\text{CH}_2)_{\text{n}}\text{XCH}_2(\text{CH}_2)_{\text{m}}\text{CHCHNH} -----\\ \\ \\ \\ \text{Me(OCH}_2\text{CH}_2)_{\text{n}}\text{X} \end{array}$$

where n is from 3 to 230 and m is from 0 to 20 and X is selected from the group consisting of N, O or S.

The method of claim 65, wherein the branched oligomeric moiety has a total average molecular weight of 4,000 to 10,000 Daltons.

69.(35) A method of treating obesity in a subject comprising administering to the subject an effective amount of a compound selected from the group consisting of:

a) A compound of the formula:

where n is from 3 to 230 and m is from 0 to 20;

b) A compound of the formula:

$$Me(OCH_2CH_2)_nXCH_2(CH_2)_mCHCHNH$$
 ——LCRF  $Me(OCH_2CH_2)_nX$ 

where n is from 3 to 230 and m is from 0 to 20 and X is selected from the group

pole 1

Attorney Docket No. 9233-22DV

Page 10 of 11

consisting of N, O or S;

c) A compound of the formula:

$$\label{eq:meoch2} \begin{split} \text{Me}(\text{OCH}_2\text{CH}_2)_n \text{OCH}_2(\text{CH}_2)_m \text{CHCHNH} & ---- \text{Protein} \\ \\ \\ \text{Me}(\text{OCH}_2\text{CH}_2)_n \text{O} \end{split}$$

where n is from 3 to 230 and m is from 0 to 20; and

d) A compound of the formula:

where n is from 3 to 230 and m is from 0 to 20 and X is selected from the group consisting of N, O or S;

and any combination thereof.